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# Introduction

The purpose of this document is to specify the propulsion solution delivered by Copenhagen Subsea A/S (CS)

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| Customer Information | | | | | | | | |
| Company Name: |  | | | | Address: | |  | |
| Country: |  | | | | State: | |  | |
| City: |  | | | | Zip Code: | |  | |
| Phone: |  | | | | Customer Registration Number/TAX number | |  | |
| Contact Person Information | | | | | | | | |
| First Name: | |  | | | Last Name: | |  | |
| Title: | |  | | |  | |  | |
| Work Phone: | |  | | | Direct Mobile: | |  | |
| E-mail: | |  | | | Ext. | |  | |

## 1.1 Vehicle Overview

Please complete the sections underneath thoroughly – thank you.

### 1.1.1 Type of vehicle

Describe the type of vehicle (ROV, AUV etc.) - please insert a drawing or image of the vehicle.

**Click Here to Enter Text or Image**

### 1.1.2 Type of Operation/Functionality of Vehicle

Describe or visualize the purpose and functionality of the vehicle.

**Click Here to Enter Text or Image**

### 1.1.3 Single or Series

Select whether you intend to build a single vehicle or produce a series of vehicles.

Single Vehicle  Series of Vehicles

If series, select the number of vehicles you intend to produce Select Quantity

### 1.1.4 Vehicle Power Specifications

Please fill out the table below.

|  |  |
| --- | --- |
| Vehicle Power Specifications | |
| Minimal Supply Voltage (VDC) | Enter Minimal Supply Voltage |
| Nominal Supply Voltage (VDC) | Enter Norminal Supply Voltage |
| Maximal Supply Voltage (VDC) | Enter Maximal Supply Voltage |
| Current Limitation (A) per Thruster | Enter Current Limitation |
| Available Power per Thruster (kW) | Enter Available Power per Thrsuter |

### 1.1.5 Hardware Setup/Wiring Diagram

Insert wiring diagram below

# Target Thruster Specifications

Fill out a table for each wanted size and configuration.

|  |  |
| --- | --- |
| Thruster Specifications | |
| Thruster Version: (Size) | Select Version |
| Thruster Configuration | Select Configuration |
| Quantity of Thruster(s) | Select Quantity |
| Select Quantity of Spare Thruster(s) | Select Quantity |
| Functionality of Thruster | Describe the intended functionality of the Thruster(s) |
| Mounting of Thruster | Selection of Mounting |
| Required Thrust Force (Newton or kgf) | **E**nter Required Thrust Force |
| Depth Range (m) | Select Depth Rating |
| Length of Cable per Thruster (m) fixed by CS | **1 meter** |
| Max. Temperature of Operational Seawater | Enter max. seawater temperature |

|  |  |
| --- | --- |
| Thruster Specifications | |
| Thruster Version: (Size) | Select Version |
| Thruster Configuration | Select Configuration |
| Quantity of Thruster(s) | Select Quantity |
| Select Quantity of Spare Thruster(s) | Select Quantity |
| Functionality of Thruster | Describe the intended functionality of the Thruster(s) |
| Mounting of Thruster | Selection of Mounting |
| Required Thrust Force (Newton or kgf) | **E**nter Required Thrust Force |
| Depth Range (m) | Select Depth Rating |
| Length of Cable per Thruster (m) | Enter Length of Cable per Thruster |
| Water-cooled cable | Select Option |
| Max. Temperature of Operational Seawater | Enter max. seawater temperature |

# 3.0 Extras and Spare Parts

Fill out the table below if extras or spare parts are wanted.

|  |  |  |
| --- | --- | --- |
| Extras and Spare Parts | | |
| Maintenance Tools | Select Size **&** Select Size **&** Select Size **&** Select Size | Select Tool |
| Propeller | Select Size **&** Select Configuration | Select Quantity |
| Propeller | Select Size **&** Select Configuration | Select Quantity |
| Propeller | Select Size **&** Select Configuration | Select Quantity |
| Propeller | Select Size **&** Select Configuration | Select Quantity |
| Inlet Ring | Select Size | Select Quantity |
| Inlet Ring | Select Size | Select Quantity |
| Inlet Ring | Select Size | Select Quantity |
| Inlet Ring | Select Size | Select Quantity |
| Outlet Ring | Select Size | Select Quantity |
| Outlet Ring | Select Size | Select Quantity |
| Outlet Ring | Select Size | Select Quantity |
| Outlet Ring | Select Size | Select Quantity |
| Independent Certified Pressure Verification | Select Option | **If yes,** Select Depth Rating |

# 4.0 Compliances

All thruster from Copenhagen Subsea A/S is in conformity with the requirements and provisions of the following European Union directives and their respective standards. See table below.

|  |  |
| --- | --- |
| **Partly Completed Machinery Directive** | 2006/42/EC |
| **EMC Directive** | EMC 2014/30/EU |
| **RoHS Directive** | RoHS 2077/65/EU |
| **REACH Directive** | (EC) No. 1907/2006 |
| **Harmonised Standards** | EN 60945 |
| EN 60204-1 |
| EN 60335-1 |
| **DNV • GL – Rules for Classification** | Underwater technology, Edition December 2015 Part 3 Pressure hull and structures Chapter 2 Design loads |

If additional compliances are required regarding the thruster(s) or motor controller, please state the required standards below.

**Insert Additional Required Thruster Compliances**

# 5.0 Acoustic Sound Level of Thruster

|  |  |
| --- | --- |
| Acoustic Sound Level | |
| **Version** | **Max. SPL(dB)** |
| Version Small (VS) | 145 SPL(dB) |
| Version Medium (VM) | 150 SPL(dB) |
| Version Large (VL) | 152 SPL(dB) |
| Version Extra Large (VXL) | 155 SPL(dB) |

# 6.0 Contact Info

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